aiwa

COMPACT DISC STEREO SYSTEM
SISTEMA ESTEREO CON REPRODUCTOR DE DISCOS COMPACTOS
CHAINE STEREO AVEC LECTEUR DE DISQUES COMPACTS

Z-VM27

OPERATING INSTRUCTIONS
MANUAL DE INSTRUCCIONES
MODE D'EMPLOI

En (English)

E (Español)

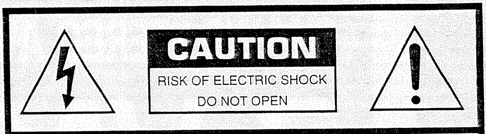
F (Français)

U

COMPACT
disc
DIGITAL AUDIO

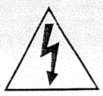
WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

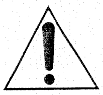


"CAUTION: TO REDUCE THE RISK OF
ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL."

Explanation of Graphical Symbols:



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk



The exclamation point within an equilateral triangle is intended to alert the user to the persence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Owner's record

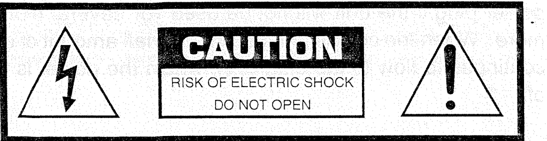
For your convenience, record the model number and serial number (you will find them on the rear of your unit) in the space provided below. Please refer to them when you contact your Aiwa dealer in case of difficulty.

Model No.	Serial No. (Lot No.)
CX-ZVM27 U	
SX-Z27	

ESPAÑOL

ADVERTENCIA

PARA REDUCIR EL RIESGO DE INCENDIOS O SACUDIDAS ELECTRICAS, NO EXPONGA ESTE APARATO A LA LLUVIA NI A LA HUMEDAD.



"CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
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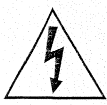
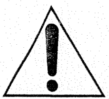
Explicación de los símbolos gráficos:



El símbolo del rayo con punta de flecha, en el interior de un triángulo equilátero, tiene la finalidad de avisar al usuario de la presencia de "tensiones peligrosas" sin aislar en el interior del producto que podrían ser de suficiente magnitud como para constituir un riesgo de sacudida eléctrica para las personas.



El signo de exclamación en el interior de un triángulo equilátero tiene la finalidad de avisar al usuario de la presencia de instrucciones de operación y mantenimiento (reparación) en el material impreso que acompaña al aparato.

Anotación del propletario

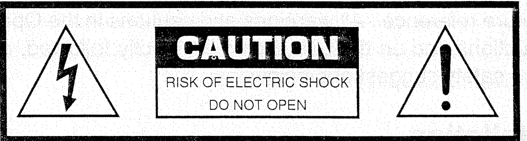
Para su conveniencia, anote el número de modelo y el número de serie (los encontrará en el panel trasero de su aparato) en el espacio suministrado más abajo. Menciónelos cuando se ponga en contacto con su concesionario Aiwa en caso de tener dificultades.

N.° de modelo	N.° de serie (N.° de lote)
CX-ZVM27 U	
SX-Z27	

FRANÇAIS

AVERTISSEMENT

POUR REDUIRE LE RISQUE DE COURT-CIRCUIT OU DE CHOC ELECTRIQUE, NE PAS EXPOSER CET APPAREIL A LA PLUIE OU A L'HUMIDITE.



"CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
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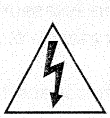
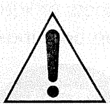
Signification des symboles graphiques:



L'éclair portant une flèche, situé dans un triangle équilatéral, sert à prévenir l'utilisateur de la présence d'une "tension dangereuse" non isolée à l'intérieur de l'appareil, assez élevée pour constituer un risque d'électrocution.



Le point d'exclamation situé dans un triangle équilatéral, sert à prévenir l'utilisateur de la présence d'instructions importantes concernant l'utilisation et l'entretien (ou la réparation) de l'appareil dans le manuel qui accompagne ce dernier.

Relevé du propriétaire

Pour plus de commodité, noter le numéro de modèle et le numéro de série (cas numéros se trouvent au dos de l'appareil) dans les cases ci-dessous. Prière de mentionner ces numéros quand on contacte un distributeur Aiwa en cas de difficulté.

N° de modèle	N° de série (N° de lot)
CX-ZVM27 U	
SX-Z27	

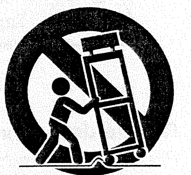
En
E
F

PRECAUTIONS

Read the Operating Instructions carefully and completely before operating the unit. Be sure to keep the Operating Instructions for future reference. All warnings and cautions in the Operating Instructions and on the unit should be strictly followed, as well as the safety suggestions below.

Installation

1. **Water and moisture** — Do not use this unit near water, such as near a bath, sink, swimming pool, or the like.
2. **Heat** — Do not use this unit near heat sources, including heating vents, stoves, or other appliances that generate heat. It also should not be placed in temperatures less than 5°C (41°F) or higher than 35°C (95°F).
3. **Mounting surface** — Place the unit on a flat, even surface.
4. **Ventilation** — The unit should be situated with adequate space around it so that proper heat ventilation is assured. Allow 10 cm (4 in.) clearance from the rear and the top of the unit, and 5 cm (2 in.) from each side.
   - Do not place the unit on a bed, rug, or similar surface that may block the ventilation openings.
   - Do not install the unit in a bookcase, cabinet, or airtight rack where ventilation may be impeded.
5. **Objects and liquid entry** — Take care that objects or liquids do not get inside the unit through the ventilation openings.
6. **Carts and stands** — When placed or mounted on a stand or cart, the unit should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit or cart to overturn or fall.



7. **Wall or ceiling mounting** --- The unit should not be mounted on a wall or ceiling, unless specified in the Operating Instructions.

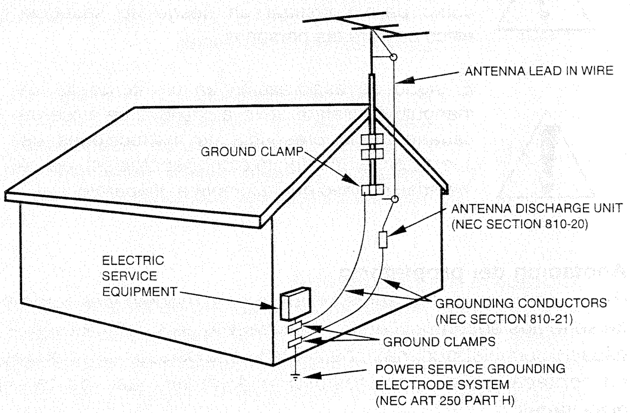
Electric Power

1. **Power sources** --- Connect this unit only to power sources specified in the Operating Instructions, and as marked on the unit.
2. **Polarization** --- As a safety feature, some units are equipped with polarized AC power plugs which can only be inserted one way into a power outlet. If it is difficult or impossible to insert the AC power plug into an outlet, turn the plug over and try again. If it is not still inserted easily into the outlet, please call a qualified service technician to service or replace the outlet. To avoid defeating the safety feature of the polarized plug, do not force it into a power outlet.
3. **AC power cord**
   - When disconnecting the AC power cord, pull it out by the AC power plug. Do not pull the cord itself.
   - Never handle the AC power plug with wet hands, as this could result in fire or shock.
   - Power cords should be firmly secured to avoid being severely bent, pinched, or walked upon. Pay particular attention to the cord from the unit to the power socket.
   - Avoid overloading AC power plugs and extension cords beyond their capacity, as this could result in fire or shock.
4. **Extension cord** — To help prevent electric shock, do not use a polarized AC power plug with an extension cord, receptacle, or other outlet unless the polarized plug can be completely inserted to prevent exposure of the blades of the plug.
5. **When not in use** — Unplug the AC power cord from the AC power plug if the unit will not be used for several months or more. When the cord is plugged in, a small amount of current continues to flow to the unit, even when the power is turned off.

Outdoor Antenna

1. **Power lines** — When connecting an outdoor antenna, make sure it is located away from power lines.
2. **Outdoor antenna grounding** — Be sure the antenna system is properly grounded to provide protection against unexpected voltage surges or static electricity build-up. Article 810 of the National Electrical Code, ANSI/NFPA70, provides information on proper grounding of the mast, supporting structure, and the lead-in wire to the antenna discharge unit, as well as the size of the grounding unit, connection to grounding terminals, and requirements for grounding terminals themselves.

Antenna Grounding According to the National Electrical Cord


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250 PART H)

NEC-NATIONAL ELECTRICAL CORD

Maintenance

Clean the unit only as recommended in the Operating Instructions.

Damage Requiring Service

Have the unit serviced by a qualified service technician if:
- The AC power cord or plug has been damaged
- Foreign objects or liquid have got inside the unit
- The unit has been exposed to rain or water
- The unit does not seem to operate normally
- The unit exhibits a marked change in performance
- The unit has been dropped, or the cabinet has been damaged

DO NOT ATTEMPT TO SERVICE THE UNIT YOURSELF.

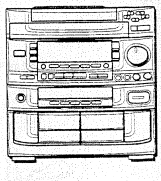
Welcome to the Aiwa Stereo System

Congratulations on your purchase of an Aiwa Stereo System. This system's CD player is the smallest in the world among players allowing the continuous playing of five discs, and this system is also equipped with the DOLBY PRO LOGIC to give you the utmost in full-scale Audio & Visual entertainment. With these, you can now experience the same listening effects found in a movie theater or concert hall.

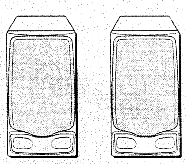
To optimize the performance of this system, please take the time to read through these Operating Instructions and become familiar with the operating procedures.

Check your system and accessories

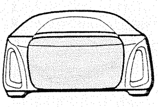
CX-ZVM27 Compact disc stereo cassette receiver



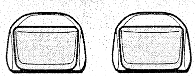
SX-Z27 (L, R)
Front speakers



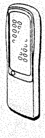
SX-C400
Center speaker



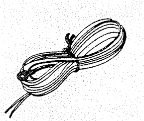
SX-R230
Surround speakers



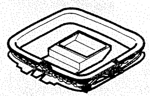
Remote control



FM antenna



AM antenna



Operating Instructions, etc.

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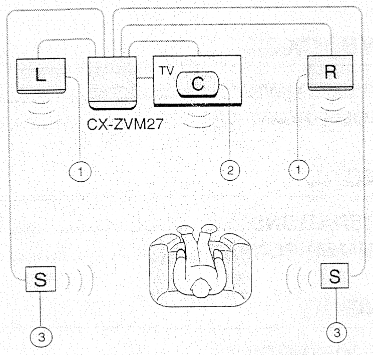
SETTING UP

The DOLBY PRO LOGIC system which is the biggest feature of this stereo system provides you with audio visual entertainment in your home.
Complete setting and connection of the main unit, supplied speakers, your TV and video equipment according to the following procedure.

POSITIONING THE SPEAKERS

To achieve the optimum effects obtainable with the DOLBY PRO LOGIC system, it is important to position the speakers properly. Refer to the following illustration to find out the best location in your room.



① Front speakers

② Center speaker

Position in the center of the two front speakers. In addition, position on or below the TV set, if connecting a TV set to the unit.

③ Surround speakers

Place the surround speakers directly to the side of or slightly behind the listening area. Align them horizontally, about 1 meter (3.2 feet) above ear height.

NOTE

- No sound is heard from the surround speakers when the DOLBY PRO LOGIC and DSP are set to off.
- The sound is heard from the center speaker only when the DOLBY PRO LOGIC is set to on.

CONNECTIONS

Before connecting the AC cord

The rated voltage of your unit shown on the rear panel is 120 V AC. Check that the rated voltage matches your local voltage.

IMPORTANT:

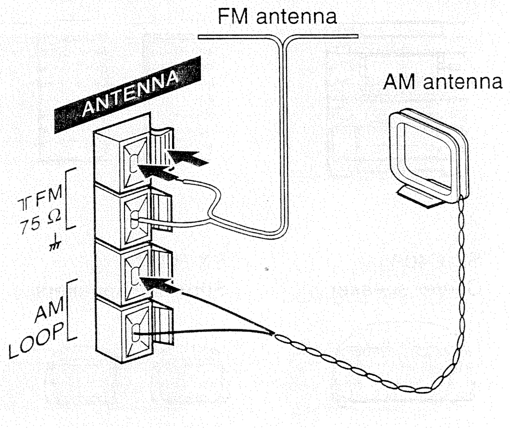
Connect the speakers, antennas, and all optional equipment first. Then connect the AC cord at the end.

The speaker system

The speaker marked R is the right speaker, and the marked L is the left speaker.

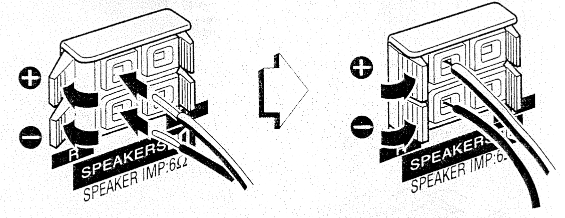
1 Connect the supplied antennas.

Connect the FM antenna to the FM 75 Ω terminals and the AM antenna to the AM LOOP terminals.



2 Connect the front speakers.

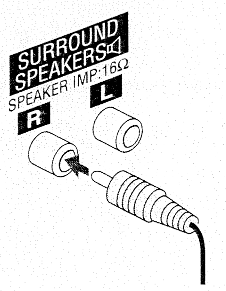
Connect the speaker with R mark to SPEAKERS R terminals, and the speaker with L mark to SPEAKERS L terminals.

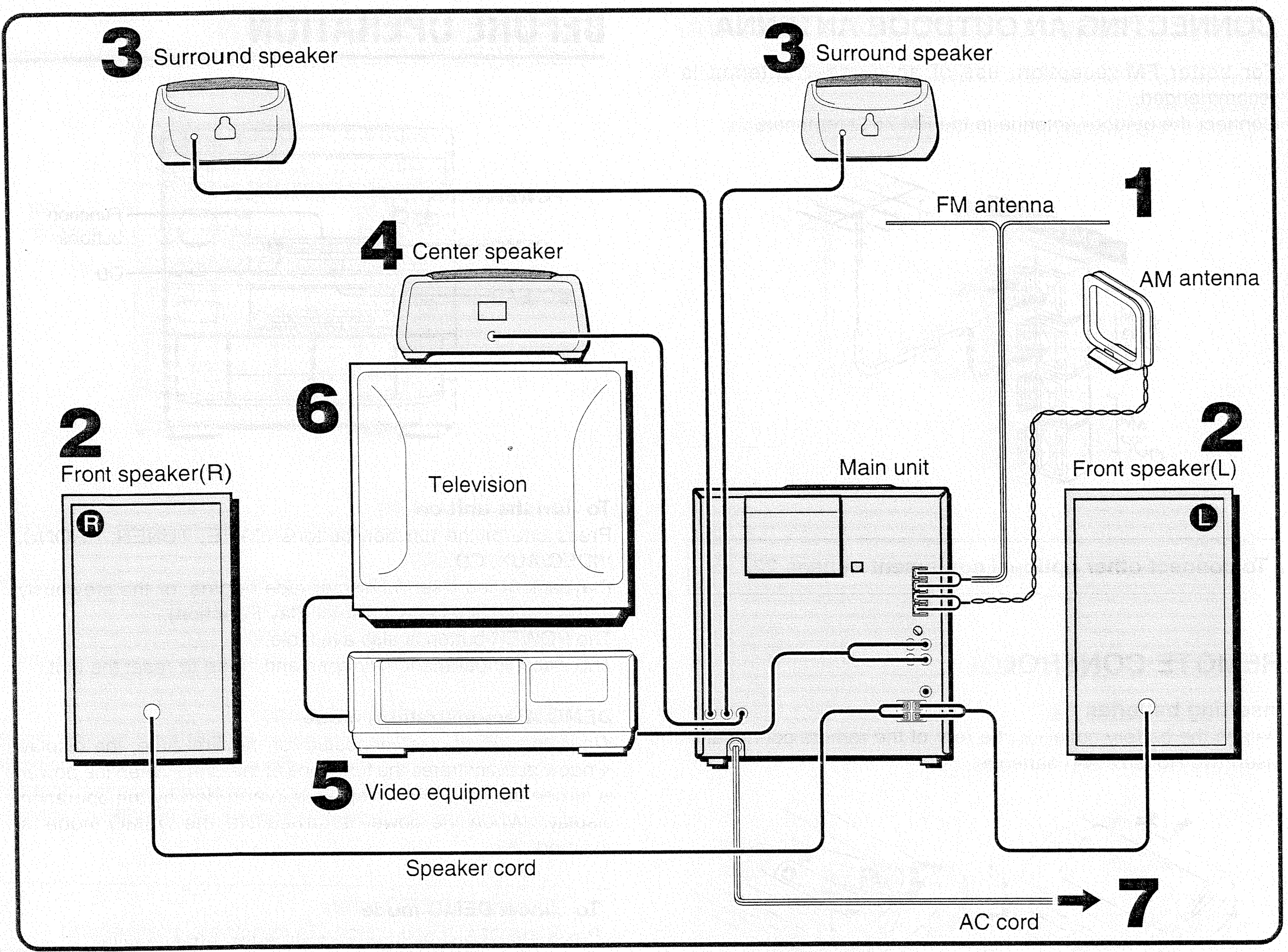


The speaker cord with the white stripe should be connected to the ⊕ terminal and the black cord to the ⊖ terminal.

3 Connect the surround speakers.

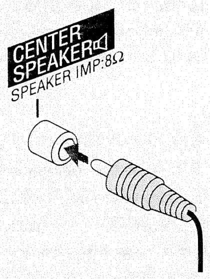
Connect the surround speaker cords to the SURROUND SPEAKERS ◁ terminals.
There is no difference between the surround speakers. Both speakers can be connected as R (right) or L (left).




3 Surround speaker
3 Surround speaker
1
FM antenna
AM antenna
4 Center speaker
6
Television
2
Front speaker(R)
R
Main unit
2
Front speaker(L)
L
5 Video equipment
Speaker cord
7
AC cord

4 Connect the center speaker.

Connect the center speaker cord to the CENTER SPEAKER ◁ terminal.


CENTER SPEAKER◁
SPEAKER IMP:8Ω

5 Connect the video equipment.

Connect the VIDEO/AUX jack of this unit to the audio output jack of the video equipment with an optional audio connecting cord.

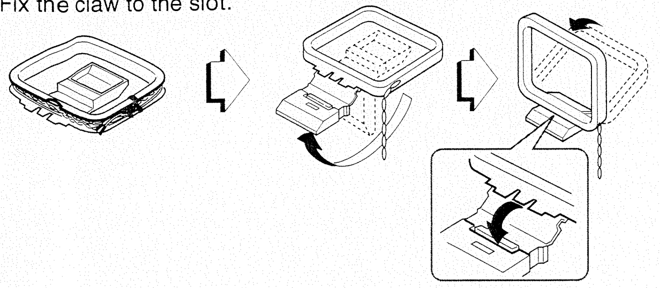
6 Connect the Television to the video equipment.

Refer to the Operating Instructions of the connected equipment for details.

7 Connect the AC cord to an AC outlet.

To stand the AM antenna on a surface

Fix the claw to the slot.



To position the antennas

FM feeder antenna:

Extend this antenna horizontally in a T-shape and fix its ends to the wall.

AM loop antenna:

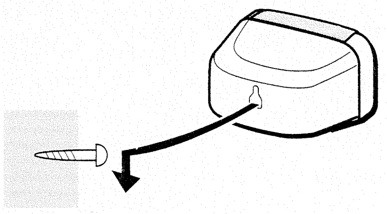
Position to find the best direction.

NOTE

- Be sure to connect the speaker cords correctly. Improper connections can cause short circuits in the SPEAKERS terminals.
- Do not leave objects generating magnetism near the speakers.
- Do not bring the FM antenna near metal objects or curtain rails.
- Do not bring the AM antenna near other optional equipment, the stereo system itself, the AC cord or speaker cords, as noise will be picked up.
- Do not unwind the AM antenna wire.

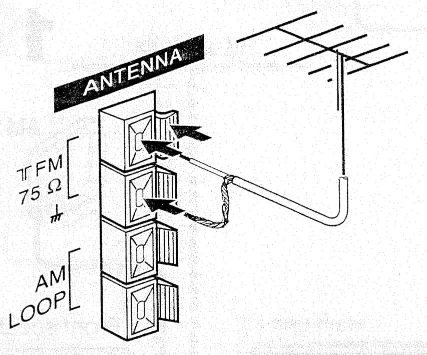
To mount the surround speakers on the wall

Carefully mount the surround speakers so that the speakers are firmly secured.



CONNECTING AN OUTDOOR ANTENNA

For better FM reception, use of an outdoor antenna is recommended.
Connect the outdoor antenna to the FM 75 Ω terminals.

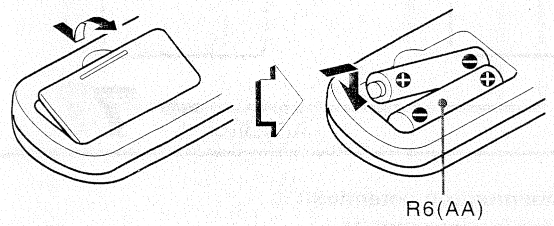


To connect other optional equipment → page 22.

REMOTE CONTROL

Inserting batteries

Detach the battery cover on the rear of the remote control and insert two R6 (size AA) batteries.



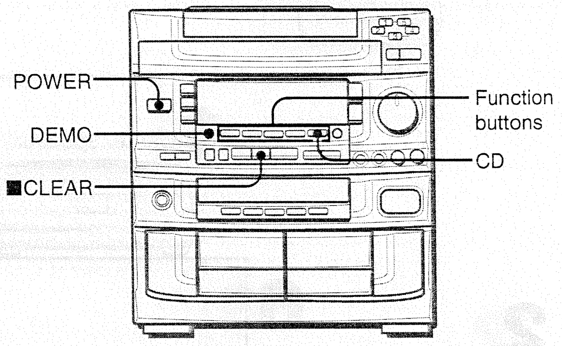
When to replace the batteries

The maximum operational distance between the remote control and the sensor on the main unit should be approximately 5 meters (16 feet). When this distance decreases, replace the batteries with new ones.

NOTE

- If the unit is not going to be used for an extended period of time, remove the batteries to prevent possible electrolyte leakage.
- The remote control may not operate correctly when:
  - The line of sight between the remote control and the remote sensor inside the display window is exposed to intense light, such as direct sunlight
  - Other remote controls are used nearby (those of a television, etc.)

BEFORE OPERATION



To turn the unit on

Press one of the function buttons (TAPE, TUNER, PHONO, VIDEO/AUX, CD).
Playback of the inserted disc or tape begins, or the previously tuned station is received (Direct Play Function).
The POWER button is also available.
The disc compartment may open and close to reset the unit.

DEMO (Demonstration) mode

When the AC cord is connected for the first time, the display window demonstrates the functions of the unit. When the power is turned on, the DEMO display is overridden by the operation display. When the power is turned off, the DEMO mode is restored.

To cancel DEMO mode
Press the DEMO button. To re-activate, press again.

Illumination guides

Whenever the AC cord is connected or one of the function buttons is pressed, the buttons for that operation light up or flash.
Example: When the AC cord is connected, the ❚❚SET button flashes as a guide to setting the current time.

Flash windows

The windows on the top of the unit and the cassette decks light up or flash while the unit is being powered on.
To turn off the light of the top window, press the ■CLEAR button while pressing the CD button. To turn back on, repeat the above.
To turn off the light of the cassette decks, press the ■CLEAR button while pressing the TAPE button. To turn back on, repeat the above.

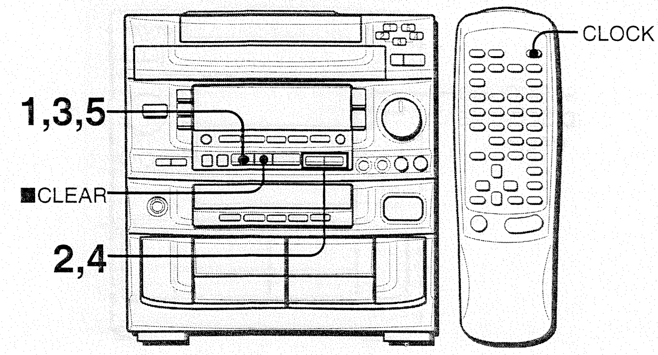
After use

Press the POWER button to turn off the power. The display changes to the clock.

Using the remote control

The instructions in this manual refer mainly to the buttons on the main unit. Buttons on the remote control with the same names as those on the main unit can be used as well.

SETTING THE CLOCK

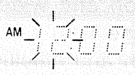


When the AC cord is connected for the first time, the ❚❚SET button flashes.

Set the time as follows while the power is off.

1 Press the ❚❚SET button.

The hour flashes.



2 Press the ⏮ DOWN or ⏭ UP button to designate the hour.

3 Press the ❚❚SET button to set the hour.

The hour stops flashing and the minute starts flashing.

4 Press the ⏮ DOWN or ⏭ UP button to designate the minute.

5 Press the ❚❚SET button to set the minute and complete setting.

The minute stops flashing on the display and the clock starts from 00 second.

To correct the current time

Press the POWER button to turn the unit off. Press the ❚❚SET button and carry out steps 1 to 5 above.

To display the current time

Press the CLOCK button on the remote control. The clock is displayed for 4 seconds.

However, the time cannot be displayed during recording.

To switch to the 24-hour standard

Press the CLOCK button on the remote control and then press the ■ CLEAR button within 4 seconds.

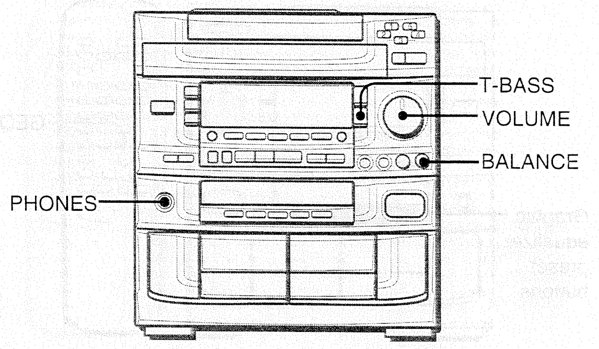
Repeat the same procedure to restore the 12-hour standard.

If the clock display flashes

This is caused by a power interruption. The current time needs to be reset.

If power is interrupted for more than approximately 24 hours, all settings stored in memory after purchase need to be reset.

SIMPLE AUDIO ADJUSTMENT



VOLUME CONTROL

Turn the VOLUME control on the main unit, or press the VOLUME buttons on the remote control.

To change the left/right balance

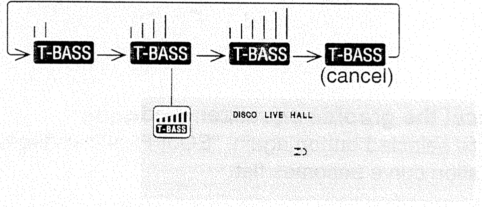
Turn the BALANCE control.

SUPER T-BASS SYSTEM

The T-BASS system enhances the realism of low-frequency sound.

Press the T-BASS button.

Each time it is pressed, the level changes. Select one of the three levels, or the off position to suit your preference.



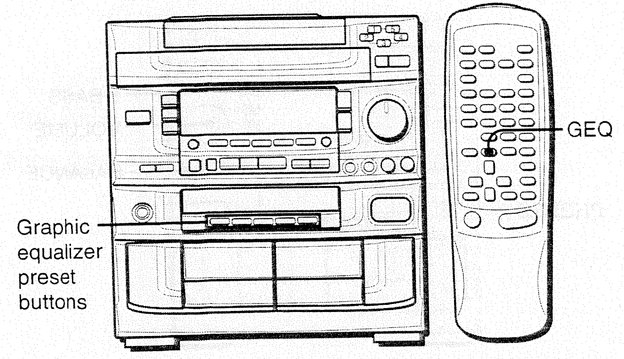
NOTE

Low-frequency sound may be distorted when the T-BASS system is used for a disc or tape in which low-frequency sound is originally emphasized. In this case, cancel the T-BASS system.

Using the headphones

- Connect headphones to the PHONES jack with a stereo standard plug (ø6.3 mm, 1/4 inch).
  No sound is output from the speakers while the headphones are plugged in.
- When the headphones are plugged in, the SURROUND mode and the DOLBY PRO LOGIC are canceled.

GRAPHIC EQUALIZER

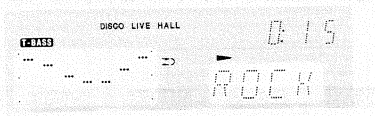


SELECTING THE DESIRED EQUALIZATION CURVE

This unit provides the following five different equalization curves.

ROCK:	Powerful sound emphasizing treble and bass
POP:	More presence in the vocals and midrange
JAZZ:	Accented lower frequencies for jazz-type music
CLASSIC:	Enriched sound with heavy bass and fine treble
BGM (Background music):	Calm tone with suppressed bass and treble

Press one of the graphic equalizer preset buttons.
The selected program mode indicator flashes and that program mode appears on the display.



To cancel the graphic equalizer mode

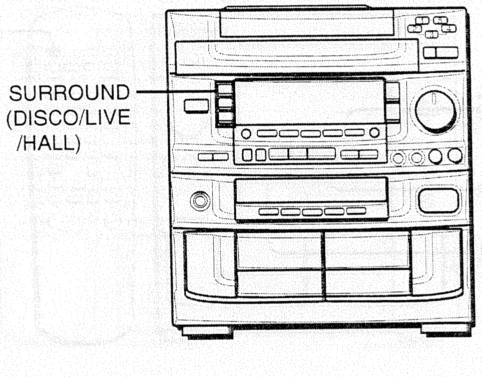
Press the selected button again. "EQoFF" is displayed and the equalization curve becomes flat.

To select with the remote control

Press the GEQ button repeatedly until the desired program mode is displayed.

→ ROCK → POP → JAZZ → CLASSIC → BGM → EQoFF (cancel) ┐

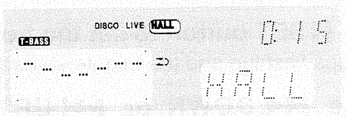
DSP SURROUND



The DSP (Digital Signal Processor) surround circuits can recreate the effect of sounds reflected from walls or ceilings, to obtain the sound presence of real environments.
There are three modes with matching graphic equalization curves.

DISCO:	Little reverberation and medium range surround to resemble a disco.
LIVE:	Long reverberation and wide range surround to resemble a live stage.
HALL:	Long reverberation and medium range surround to resound like a hall.

Press one of the SURROUND buttons.



Equalization curves are selected automatically to match the SURROUND modes and can also be selected manually or turned off to suit your preference.

When the music source is monaural

Select LIVE to obtain a simulated stereo effect. When DISCO or HALL is selected, no sound will be heard from the surround speakers.

To cancel the selected mode

Press the selected SURROUND button again. "S-oFF" is displayed.
While the SURROUND mode is off, no sound is heard from the surround speakers.

To adjust the volume of the surround speakers

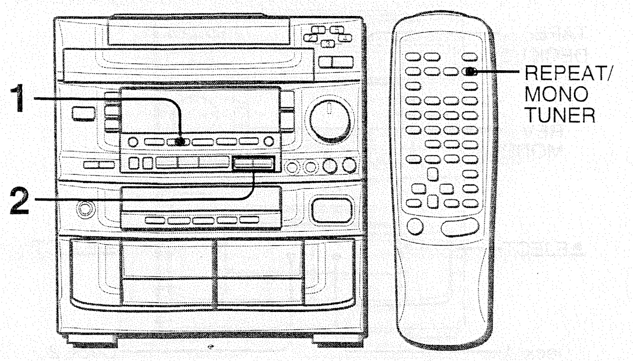
Press the MANUAL SELECT button once on the remote control. "S" is displayed for 2 seconds. Press the ◀◀ DOWN or UP ▶▶ button on the remote control within these 2 seconds.

- The DOLBY PRO LOGIC surround speakers level is also changed. (See page 17.)

NOTE

- When a microphone is used, the SURROUND mode is automatically canceled.
- When the DOLBY PRO LOGIC is turned on, the SURROUND mode is automatically canceled.

MANUAL TUNING

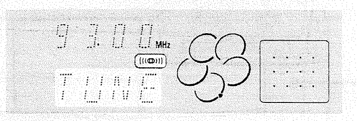


1 **Press the TUNER/BAND button to select the FM or AM band.**

If the power is turned off, the previously tuned station will be played (Direct Play Function).

2 **Press the |◀◀ DOWN or ▶▶| UP button to tune in to a station.**

Each time the button is pressed, the frequency changes.
When a station is received, "TUNE" is displayed for 2 seconds.
During FM stereo reception, ((◎)) is displayed.



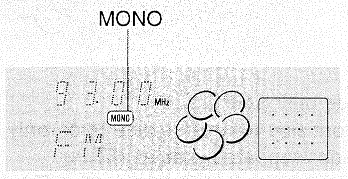
To search for a station quickly (Auto Search)

Keep the |◀◀ DOWN or ▶▶| UP button pressed until the tuner starts searching for a station. After tuning in to a station, the search stops.
To stop the Auto Search manually, press the |◀◀ DOWN or ▶▶| UP button.

- The Auto Search may not stop at stations with very weak signals.

When an FM stereo broadcast contains noise

Press the REPEAT/MONO TUNER button on the remote control so that "MONO" appears on the display.
Noise is reduced, although reception is monaural.

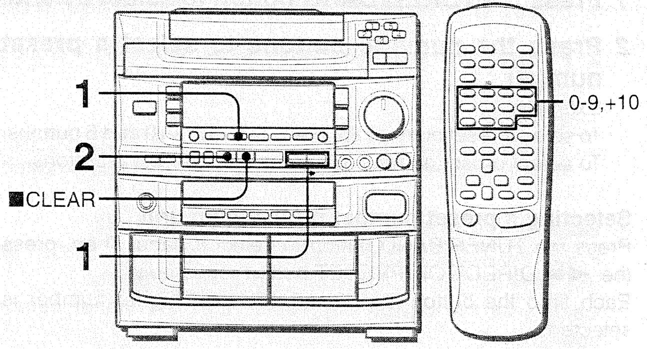


To restore stereo reception, press the button so that MONO disappears.

To change the AM tuning interval

The default setting of the AM tuning interval is 10 kHz/step. If you use this unit in an area where the frequency allocation system is 9 kHz/step, change the tuning interval.
Press the POWER button while pressing the TUNER/BAND button.
To reset the interval, repeat this procedure.

PRESETTING STATIONS

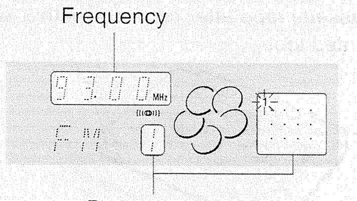


The unit can store a total of 32 preset stations. When a station is stored, a preset number is assigned to the station. Use the preset number to tune in to a preset station directly.

1 **Press the TUNER/BAND button to select a band, and press the |◀◀ DOWN or ▶▶| UP button to tune in to a station.**

2 **Press the ❚❚SET button to store the station.**

A station is assigned to a preset number, beginning from 1 in consecutive order for each band.



3 **Repeat steps 1 and 2.**

No more stations will be stored if a total of 32 preset stations have already been stored for both the bands.

NOTE

When the AM tuning interval is changed, all preset stations are cleared. The preset stations have to be set again.

PRESET NUMBER TUNING

Use the remote control to select the preset number directly.

1 **Press the TUNER/BAND button to select a band.**

2 **Press the numeric buttons to select a preset number.**
Example:
To select preset number 25, press the +10, +10 and 5 buttons.
To select preset number 10, press the +10 and 0 buttons.

Selecting a preset number on the main unit

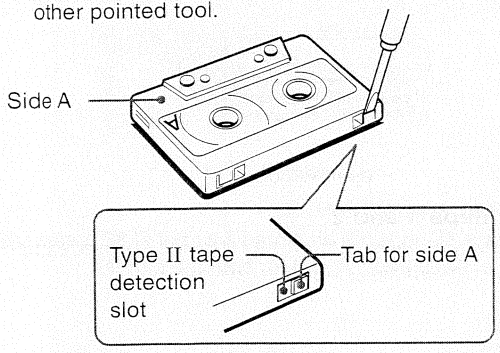
Press the TUNER/BAND button to select a band. Then, press the ◀▶ DIRECTION/PRESET button repeatedly.
Each time the button is pressed, the next higher number is selected.

To clear a preset station

Select the preset number of the station to be cleared with the numeric buttons. Then, press the ■ CLEAR button, and press the ❚❚ SET button within 4 seconds.
The preset numbers of all other stations in the band with higher numbers are also decreased by one.

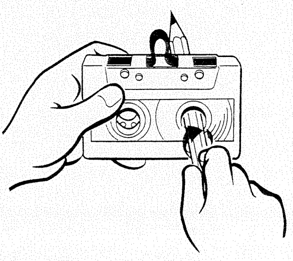
About cassette tapes

- **To prevent accidental erasure,** break off the plastic tabs on the cassette tape after recording with a screwdriver or other pointed tool.



To record on the tape again, cover the tab openings with adhesive tape, etc. (On Type II tapes, take care not to cover the Type II tape detection slot.)

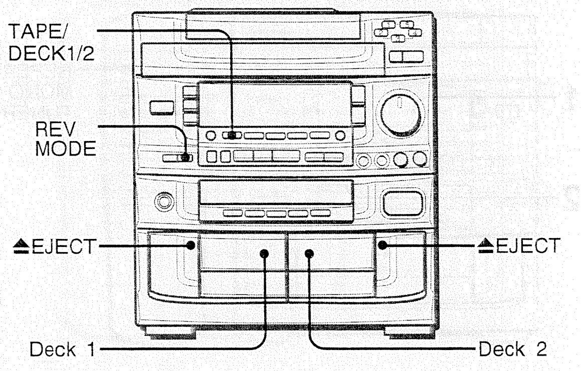
- **120-minute or longer tapes** are extremely thin and easily deformed or damaged. They are not recommended.
- **Take up any slack in** the tape with a pencil or similar tool before use. Slack tape may break or jam in the mechanism.



DOLBY NR system

The Dolby Noise Reduction system reduces tape hiss noise. For optimum performance when playing back a tape recorded with the DOLBY NR system, turn on the DOLBY NR system.

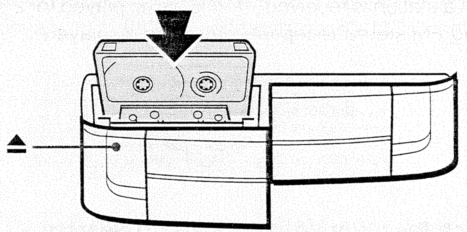
BASIC OPERATIONS



INSERTING TAPES

Use Type I (normal), Type II (high/CrO$_2$) or Type IV (metal) tapes for playback.

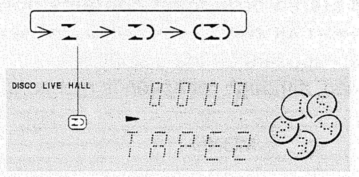
Press the TAPE button and press the ≜ EJECT mark to open the cassette holder.



Insert a tape with the exposed side down. Push the cassette holder to close.

To select a reverse mode of Deck 2

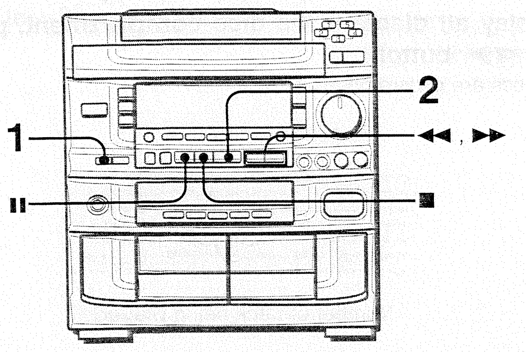
Each time the REV MODE button is pressed, the reverse mode changes.



To play one side only, select ⌶.
To play from front side to reverse side once only, select ⌶).
To play both sides repeatedly, select (⌶).

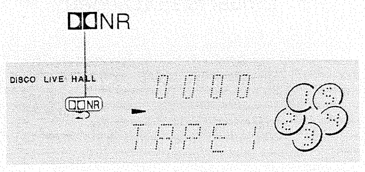
- When tapes are loaded in both decks, ⌶) on the display indicates Continuous Play.
- On deck 1, tapes are always played back on both sides once.

PLAYING BACK A TAPE



Insert a tape.

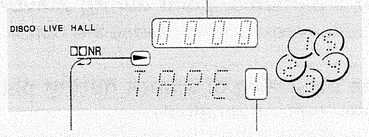
1 Press the DOLBY NR button and turn Dolby NR on or off to match the playback tape.



For tapes recorded with DOLBY NR, turn on DDNR.
For tapes recorded without DOLBY NR, turn off DDNR.

2 Press the ◀▶ button to start play.

The tape counter indicates the tape running length.



Playback side of the tape

Tape deck number being played

▶: The front side is being played (forward).
◀: The back side is being played (reverse).

When tapes are loaded in both decks
Press the TAPE button first to select a deck.
The selected deck number is displayed.

To stop play, press the ■ button.
To pause play (Deck 2 only), press the ❚❚ button. To resume play, press again.
To change the playback side, press the ◀▶ DIRECTION/PRESET button in play or pause mode.
To fast forward or rewind, press the ◀◀ or ▶▶ button in stop mode. Then press the ■ button to stop the tape.

To start play when the power is off (Direct Play Function)
Press the TAPE button. The power is turned on and play of the inserted tape begins.

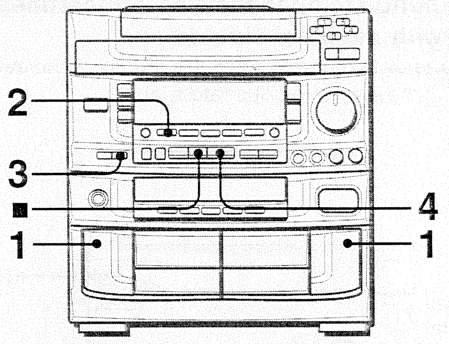
To set the tape counter to 0000
Press the ■CLEAR button in stop mode.
The counter is also set to 0000 when the cassette holder is opened.

MUSIC SENSOR

If there is a 4-second or longer blank between each track, a search for the beginning of the current or next track during playback can be done easily.
When the ▶ indicator of the ◀▶ button is flashing, press the ▶▶ button to move to the next track or the ◀◀ button to move to the beginning of the current track.
When the ◀ indicator of the ◀▶ button is flashing, press the ◀◀ button to move to the next track, or the ▶▶ button to move to the beginning of the current track.

The search function may not be able to detect tracks under the following conditions:
- Blanks of less than 4 seconds between tracks
- Noisy blanks
- Long passages of low-end sound
- Low overall recording levels

CONTINUOUS PLAY



After playback on one deck finishes, the tape in the other deck will start to play without interruption.

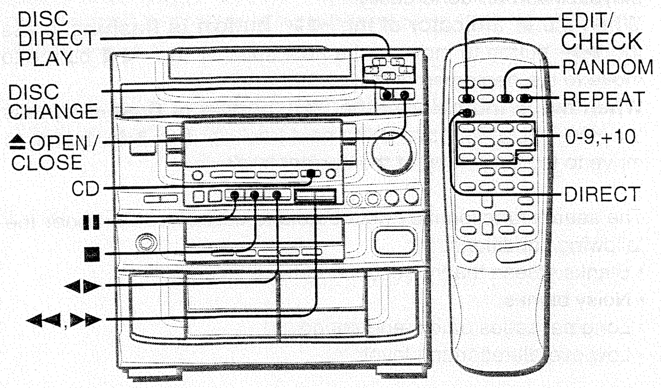
1 Insert tapes into Deck 1 and Deck 2.

2 Press the TAPE/DECK 1/2 button to select the deck to be played back first.

3 Press the REV MODE button to select ⊐⊃.

4 Press the ◀▶ button to start playback.
Playback continues until the ■ button is pressed.

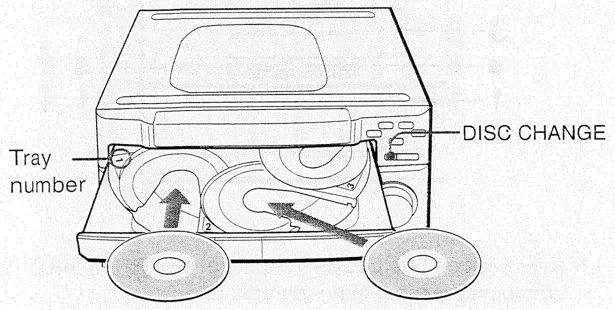
BASIC OPERATIONS


DISC DIRECT PLAY
DISC CHANGE
▲OPEN/CLOSE
CD
❚❚
■
◀▶
◀◀,▶▶
EDIT/CHECK
RANDOM
REPEAT
0-9,+10
DIRECT

LOADING DISCS

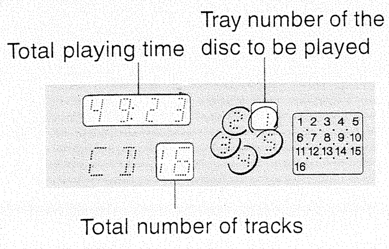
Press the CD button, then press the ▲OPEN/CLOSE button to open the disc compartment. Load disc(s) with the label side up.

To load one or two discs, place the disc(s) on the tray(s) in the direction of the arrows as illustrated.


DISC CHANGE
Tray number

To load three to five discs, press the DISC CHANGE button to rotate the trays after placing two discs. Place the next disc on empty tray. Each time the DISC CHANGE button is pressed, the trays rotate and one disc can be placed.

After placing the discs, press the ▲OPEN/CLOSE button to close the disc compartment.
The display shows the information of the disc to be played.

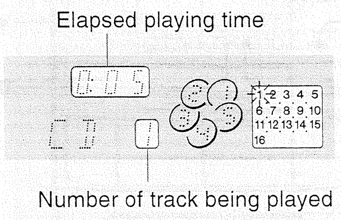

Total playing time
Tray number of the disc to be played
Total number of tracks

PLAYING DISCS

Load discs.

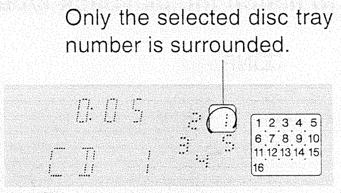
To play all discs in the disc compartment, press the ◀▶ button.

All discs are played once.


Elapsed playing time
Number of track being played

To play one disc only, press one of the DISC DIRECT PLAY buttons.

The disc with the selected tray number is played once.


Only the selected disc tray number is surrounded.

To play with the remote control

Press the DIRECT button, then press one of the numeric buttons 1 to 5 within 3 seconds to select a disc.

To stop play, press the ■ button.
To pause play, press the ❚❚ button. To resume play, press again.
To search for a particular point during playback, keep the ◀◀ or ▶▶ button pressed and release the button at the desired point.
To skip to the beginning of a track during playback, press the ◀◀ or ▶▶ button repeatedly.
To remove discs, press the ▲OPEN/CLOSE button.
You can only remove the two discs that face you. When the disc(s) to be removed does not face you, press the DISC CHANGE button repeatedly.

To start play when the power is off (Direct Play Function)

Press the CD button. The power turns on and play of the loaded disc begins.
To replace discs before play, press the ▲OPEN/CLOSE button to open the disc compartment.

To check the remaining time

Press the EDIT/CHECK button on the remote control during play. The amount of time remaining until all tracks finish playing is displayed. To restore the playing time display, press the EDIT/CHECK button.

Selecting a track with the remote control

1 Press the DIRECT button, then press one of the numeric buttons 1 to 5 within 3 seconds to select a disc.
2 Press the numeric buttons and the +10 button to select a track.
Example:
To select the 25th track, press the +10, +10 and 5 buttons.
To select the 10th track, press the +10 and 0 buttons.
The selected track starts to play and play continues to the end of that disc.

Replacing discs during play

While one disc is playing, the other discs can be replaced without interrupting play.

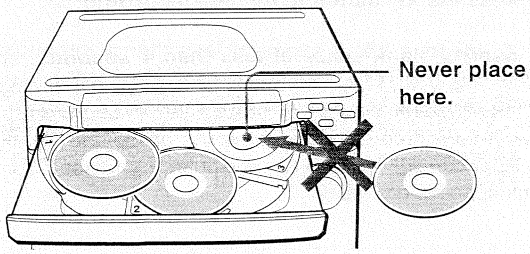
1 Press the DISC CHANGE button.
Two discs can be replaced.

2 Remove the discs and replace with other discs.
To replace the other two discs, press the DISC CHANGE button again.

3 Press the ⏏ OPEN/CLOSE button to close the disc compartment.

NOTE

- When loading an 8-cm (3-inch) disc, make sure to place it onto the inner circle of the tray precisely. Otherwise, the disc may be damaged or the disc compartment will not open. If it does not open, please consult your Aiwa dealer for repair.
- Do not place more than one compact disc on one disc tray.
- Do not tilt the unit with discs loaded. Doing so may cause malfunctions.
- When transporting the unit, remove the discs from the trays.
- When replacing the discs during play, do not replace discs other than those facing you.
If you place a disc on the empty right inner tray, and then press the ⏏ OPEN/CLOSE button, "ERROR" is displayed and the disc compartment may not close. Remove the disc on that tray.



RANDOM PLAY

All the tracks on the selected disc or on all the discs can be played randomly.

Press the RANDOM button on the remote control.

RANDOM lights up on the display.

To cancel random play, press again.

NOTE

- Even if the ◀◀ button is pressed during random play, a previously played track cannot be skipped. The unit returns to the beginning of the current track only.
- Direct selection of the tracks with the numeric buttons is not possible.

REPEAT PLAY

A single disc or all the discs can be played repeatedly.

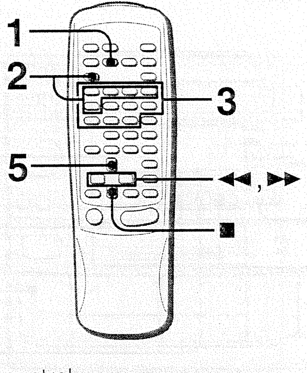
Press the REPEAT button on the remote control.

⊂⊃ lights up on the display.

To cancel repeat play, press again.

PROGRAMMED PLAY

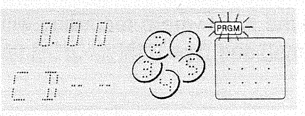
Up to 30 tracks can be programmed from any of the inserted discs.



Use the remote control.

1 **Press the PRGM button twice in stop mode.**

The PRGM indicator flashes on the display.



- When the PRGM button is pressed once in step 1, the unit enters the KARAOKE PROGRAM (page 20).

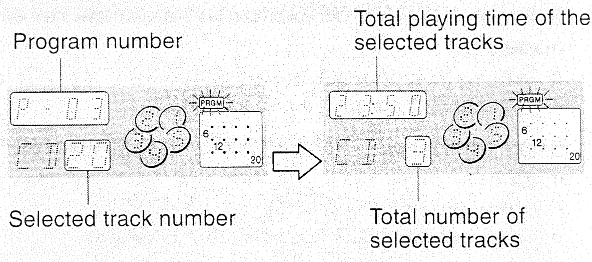
2 **Press the DIRECT button, then press one of the numeric buttons 1 to 5 within 3 seconds to select a disc.**

The selected disc is indicated in red on the display.
Go to the next step when the tray stops rotating.

3 **Press the numeric buttons and the +10 button to program a track.**

Example:

To select the 25th track, press the +10, +10 and 5 buttons.
To select the 10th track, press the +10 and 0 buttons.


Program number
Total playing time of the selected tracks
PRGM
6
12
20
Selected track number
Total number of selected tracks

4 **Repeat steps 2 and 3 to program other tracks.**

5 **Press the ◀▶ button to start play.**

To check the program

Each time the ◀◀ or ▶▶ button is pressed in stop mode, a disc number, track number, and program number will be displayed.

To clear the program

Press the ■ CLEAR button in stop mode.

To add tracks to the program

Before playing, repeat steps 2 and 3. The track will be programmed after the last programmed track.

To change the programmed tracks

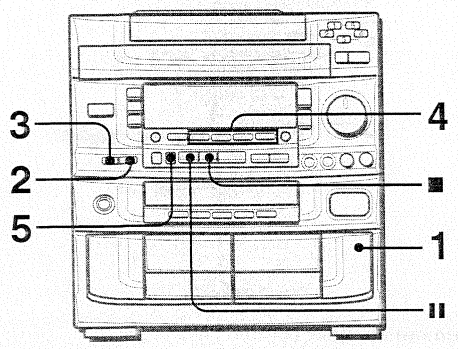
Clear the program and repeat all the steps again.

NOTE

During programmed play, the EDIT/CHECK, DISC CHANGE, RANDOM, DIRECT and numeric buttons do not function.

BASIC RECORDING

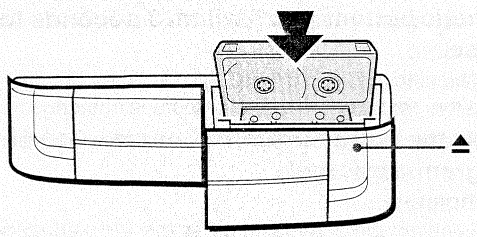
This section explains how to record from the tuner, CD player, or external equipment.



Preparation

- Set the tape to the point where recording will start.
- Use Type I (normal) and Type II (high/CrO₂) tapes for recording.

1 **Insert the tape to be recorded on into Deck 2.**
Insert the tape with the side to be recorded on first facing out from the unit.

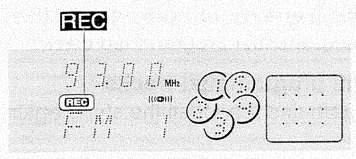


2 **Press the REV MODE button to select the reverse mode.**
To record on one side only, select ⊐.
To record on both sides, select ⊐) or (⊐).

3 **Press the DOLBY NR button to turn Dolby NR on or off.**
To record with DOLBY NR, turn on ᗡᗞNR.
To record without DOLBY NR, turn off ᗡᗞNR.

4 **Press one of the function buttons and prepare the source to be recorded.**
To record from a CD, press the CD button and load the disc(s).
To record from a radio broadcast, press the TUNER button and tune in to a station.
To record from the connected source, press the PHONO or VIDEO/AUX button and play.

5 **Press the ● REC/REC MUTE button to start recording.**



When the selected function is CD, playback and recording start simultaneously.

To stop recording, press the ■ button.
To pause recording, press the ❚❚ button. (Applicable when the recording source is TUNER, PHONO or VIDEO/AUX.) To resume recording, press again.

To start recording with the remote control
First press the ● REC/REC MUTE button, and then press the ◀▶ button within 2 seconds.

SOUND ADJUSTMENT DURING RECORDING

The output volume and tone of the speakers or headphones may be freely varied without affecting the level of the recording.

INSERTING BLANK SPACES

Insertion of 4-second blank spaces enables you to activate the Music Sensor function. (Applicable when the source is TUNER, PHONO or VIDEO/AUX.)

1 **Press the ● REC/REC MUTE button during recording or while in recording pause mode.**
REC on the display flashes for 4 seconds and the tape runs without recording. After 4 seconds, the deck enters the recording pause mode.

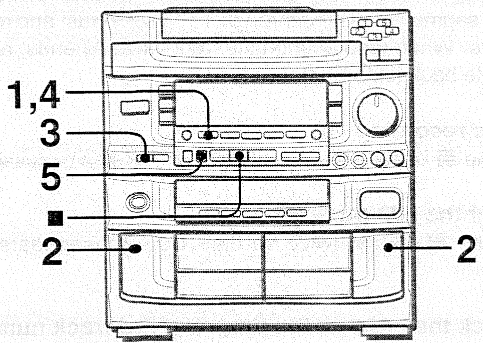
2 **Press the ❚❚ button to resume recording.**

To insert a blank space of less than 4 seconds, press the ● REC/REC MUTE button again while REC is flashing.
To insert blank spaces of more than 4 seconds, after the deck enters recording pause mode, press the ● REC/REC MUTE button again. Each time the button is pressed, a 4-second blank space is added.

To erase a recording
Make sure the microphone is not connected to this unit.

1 Insert the tape to be erased into Deck 2 and press the TAPE/DECK 1/2 button to display "TAPE 2".
2 Set the tape to the point where the erasure is to be started.
3 Set the reverse mode by pressing the REV MODE button.
4 Press the ● REC/REC MUTE button to start the erasure.

DUBBING A TAPE MANUALLY



Preparation

- Set the tape to the point where recording will start.
- The reverse mode is automatically set to ⊐. Note that recording will be done on one side of the tape only.

1 **Press the TAPE button.**

2 **Insert the original tape into Deck 1 and the tape to be recorded on into Deck 2.**
Insert the tapes with the sides to be played back or recorded on first facing out from the unit.

3 **Press the DOLBY NR button to turn off the Dolby NR.**
DDNR on the display goes out.

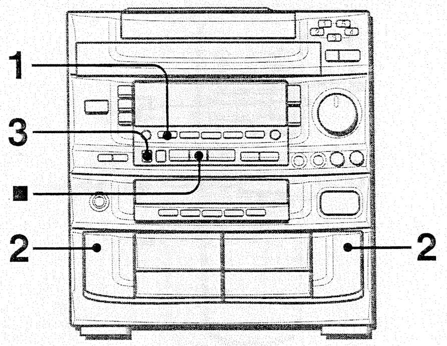
4 **Press the TAPE/DECK 1/2 button to select Deck 1.**
TAPE 1 is displayed.

5 **Press the ● REC/REC MUTE button to start recording.**
Playing and recording start simultaneously.

To stop dubbing
Press the ■ button.

To set the Dolby NR when playing back the dubbed tape
Press the DOLBY NR button and turn Dolby NR on or off to match the original tape.

DUBBING THE WHOLE TAPE



This function allows you to make exact copies of both sides of the original tape. The reverse side of both tapes will start simultaneously as soon as the longer tape has been reversed.

NOTE

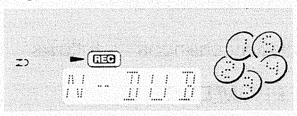
- Dubbing does not start from a point halfway in the tape.
- The reverse mode is automatically set to ⊐⊃. Recording will be done on both sides.
- The Dolby NR does not affect recording.

1 **Press the TAPE button.**

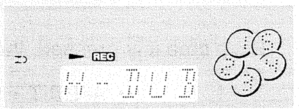
2 **Insert the original tape into Deck 1 and the tape to be recorded on into Deck 2.**
Insert each tape with the side to be played back or recorded on first facing out from the unit.

3 **Press the SYNC DUB button once or twice to start recording.**
① **For recording at normal speed,** press it once to display N-DUB.
② **For recording at high speed,** press it twice to display H-DUB.

①



②



The tapes are rewound to the beginning of the front sides, and recording starts.

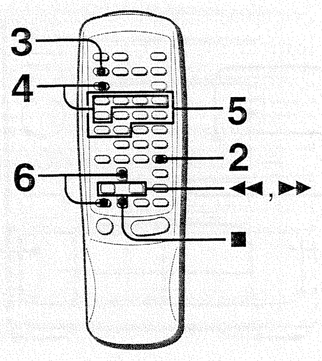
To stop dubbing
Press the ■ button.

To set the Dolby NR when playing back the dubbed tape
Press the DOLBY NR button and turn Dolby NR on or off to match the original tape.

NOTE

- Recording does not start, if the erasure prevention tab on either side of the tape is broken off.
- If the leader segment of the tape to be recorded on is longer than that of the original tape, recording on the reverse side may stop midway through the recording. In this case, dub each side manually following the procedure in "DUBBING A TAPE MANUALLY".

AI EDIT RECORDING



The AI edit function enables CD recording without worrying about tape length and track length. When a CD is inserted, the unit automatically calculates the total track lengths. If necessary, the order of tracks are rearranged so that no track is cut short. (AI: Artificial Intelligence)

NOTE

AI edit recording will not start from a point halfway into the tape. The tape must be recorded from the beginning of either side.

Use the remote control from steps 3 to 6.

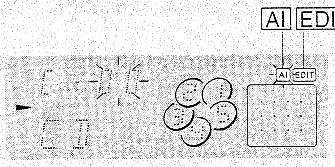
1 **Insert the tape into Deck 2, and press the DOLBY NR button to turn Dolby NR on or off.**

Insert the tape with the side to be recorded on first facing out from the unit.

2 **Press the CD button and load the disc(s).**

3 **Press the EDIT/CHECK button once.**

"EDIT" lights up and "AI" flashes on the display.



Each time it is pressed, the display changes as follows.

→ AI EDIT → PRGM EDIT

4 **Press the DIRECT button, then press one of the numeric buttons 1 to 5 within 3 seconds to select a disc.**

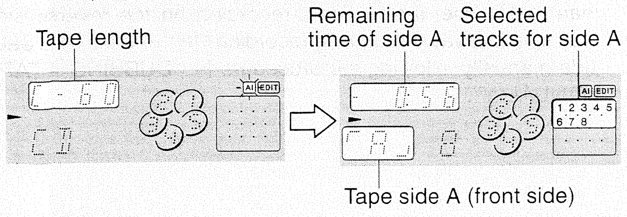
5 **Press the numeric buttons to designate the tape length.**

10 to 99 minutes can be specified.

Example: When using a 60-minute tape, press the 6 and 0 buttons.

In a few seconds, the microcomputer determines the tracks to be recorded on each side of the tape.

- The ◄◄ and ►► buttons are also available to designate the tape length.



6 **First press the ●REC/REC MUTE button, then press the ◄► button within 2 seconds to start recording.**

The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When recording on the front (side A) ends, recording on the back (side B) starts.

To stop recording

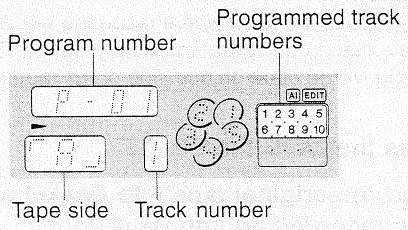
Press the ■ button. Recording and CD play stop simultaneously.

To clear the edit program

Press the ■ button twice so that "EDIT" disappears on the display.

To check the order of the programmed track numbers

Before recording, press the EDIT/CHECK button to select side A or B to be checked, and press the ◄◄ or ►► button repeatedly.



To add tracks from other discs to the edit program

If there is any time remaining on the tape after step 5, you can add tracks from other discs in the CD compartment .

1. Press the EDIT/CHECK button to select side A or B.
2. Press the DIRECT button, then press one of the numeric buttons 1 to 5 within 3 seconds to select a disc.
3. Press the numeric buttons to select tracks. AI goes out and PRGM starts flashing on the display. A track which has a playing time longer than the remaining time cannot be programmed.
4. Repeat steps 2 and 3 to add more tracks.
5. Start recording.

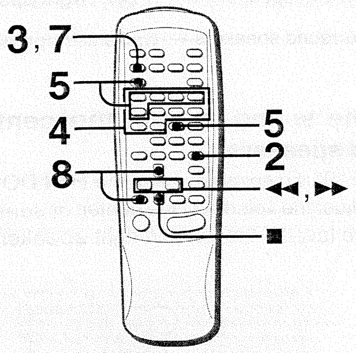
Time on cassette tapes and editing time

The actual cassette recording time is usually a little longer than the specified recording time printed on the label. This unit can program tracks to use the extra time. When the total recording time is a little longer than the tape's specified recording time after editing, the display shows the extra time (without a minus mark), instead of the time remaining on the tape (with the minus mark).

NOTE

- Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.
- The AI edit function cannot be used with discs containing 31 tracks or more.

PROGRAMMED EDIT RECORDING



Programmed edit function enables CD recording while checking the remaining time on each side of the tape as the tracks are programmed.

NOTE

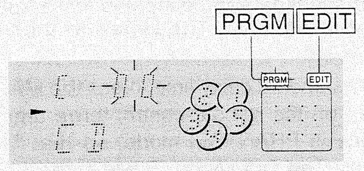
The programmed edit recording will not start from a point halfway in the tape. The tape must be recorded from the beginning of either side.

Use the remote control from steps 3 to 8.

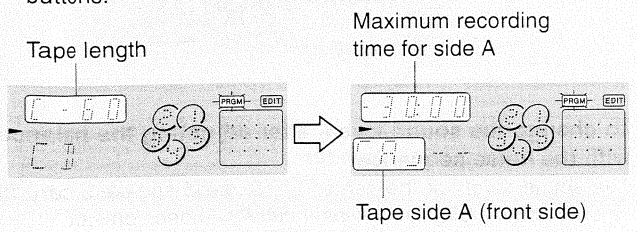
1 **Insert the tape into Deck 2, and press the DOLBY NR button to turn Dolby NR on or off.**
Insert the tape with the side to be recorded on first facing out from the unit.

2 **Press the CD button and load the disc(s).**

3 **Press the EDIT/CHECK button twice.**
"EDIT" lights up and "PRGM" flashes on the display.

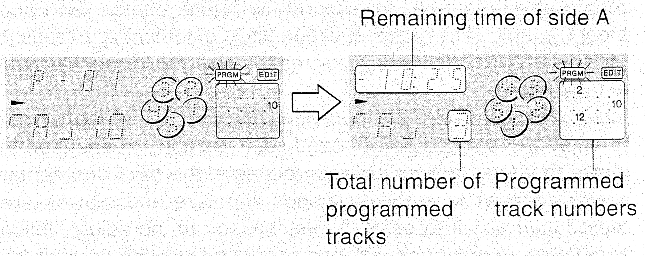


4 **Press the numeric buttons to designate the tape length.**
10 to 99 minutes can be specified.
Example: When using a 60-minute tape, press the 6 and 0 buttons.

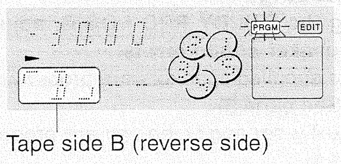

Tape length
Maximum recording time for side A
Tape side A (front side)

5 **Press the DIRECT button, then press one of the numeric buttons 1 to 5 within 3 seconds to select a disc, and press the numeric buttons to program a track.**
Example: To select the 10th track of disc 2, press the DIRECT button and the numeric button 2, then the numeric buttons +10 and 0.

6 **Repeat step 5 for the rest of the tracks for side A.**
A track which has a playing time longer than the remaining time cannot be programmed.


Remaining time of side A
Total number of programmed tracks
Programmed track numbers

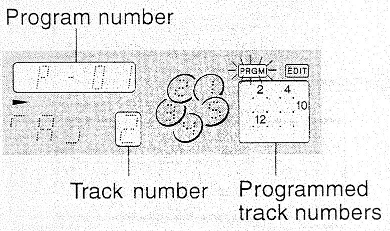
7 **Press the EDIT/CHECK button to select side B and program the tracks for side B.**
After confirming B on the display, repeat step 5.


Tape side B (reverse side)

8 **Press the ●REC/REC MUTE button and then press the ◄► button within 2 seconds to start recording.**
The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When recording on the front side A ends, recording on the back side B starts.

To stop recording
Press the ■ button. Recording and CD play stop simultaneously.

To check the order of the programmed track numbers
Before recording, press the EDIT/CHECK button to select side A or B, and press the ◄◄ or ►► button repeatedly.


Program number
Track number
Programmed track numbers

To change the program of each side
Press the EDIT/CHECK button to select side A or B, and press the ■CLEAR button to clear the program of the selected side. Then program tracks again.

To clear the edit program
Press the ■CLEAR twice so that "EDIT" disappears on the display.

NOTE

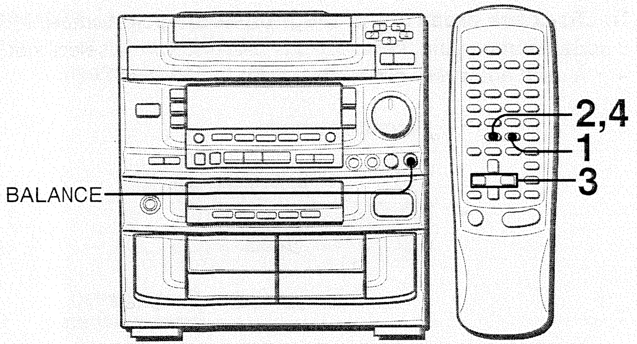
Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.

The Dolby Pro Logic feature and the center and rear speakers (standard) assure full-scale home theater sound. When playing back laser discs or video software that have been specially recorded with four-channel sound (left, right, center, rear) and steering logic (for sound directionality), astonishingly realistic sound surrounds the listener to create a new level of audio/visual entertainment.
Independent control of the four sound channels allows the listener to enjoy the same type of sound reproduction experienced in movie theaters. Voices are reproduced in the front and center sound field, while ambient sounds like cars and crowds are reproduced on all sides of the listener for an incredibly lifelike audio/video experience. Please read the following carefully to "tune" the system's output to match the characteristics of your listening space.

Check the following:

- **Before using the DOLBY PRO LOGIC, adjust the proper balance of speaker sound levels.**
- Make sure the supplied speakers are properly connected and positioned. (See page 3)
- Make sure the TV set and video unit are properly connected. (See page 4)
- Make sure the laser disc, video tape, etc., support DOLBY SURROUND .

ADJUSTING SPEAKER LEVEL BALANCE

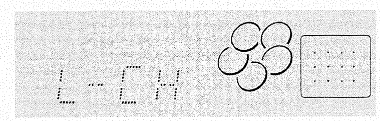


The unit is equipped with a built-in test signal generator called a noise sequencer for easy balance adjustment of all four channels. The sequencer outputs a noise signal that "travels" from channel to channel, enabling the simple adjustment of sound level to achieve, at the listening position, the same apparent loudness from each channel.

Use the remote control.

1 **Press the DOLBY PRO LOGIC button to select NORMAL.**
If PHANTOM or 3CH LOGIC appears, press the DOLBY PRO LOGIC button repeatedly until NORMAL is selected.

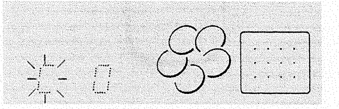
2 **Press the MANUAL SELECT (TEST) button and hold it down for about four seconds until "L-CH" lights.**



A noise signal is sent to each channel in turn following sequence.

→ **L-CH:** Left speaker → **R-CH:** Right speaker
S: Surround speakers ← **C:** Center speaker ←

3 **Adjust the sound level of the center and the surround speakers.**
While "C" or "S" is displayed, press the ⏮ DOWN or UP ⏭ button to adjust the volume of the center or surround speakers to match the level of the left and right speakers.



To adjust the balance between the left and right speakers, use the BALANCE control while "L" or "R" is displayed.

4 **Press the MANUAL SELECT (TEST) button again to stop the noise signal.**

NOTE

If the surround speakers volume of the DSP is changed (See page 7), the DOLBY PRO LOGIC level is also changed.

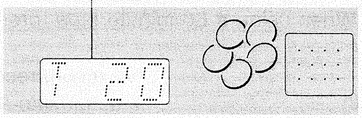
About the channels

The left and right speakers create the stereo effect.
The center speaker helps achieve precise sound positioning over a broad sound field.
The rear-mounted surround speakers enhance the "depth" of the sound field.

To change the delay time

The surround speakers reproduce sounds a split second after the front speakers. The delay is initially set to 20 ms (milliseconds).
To change this standard delay time, press the MANUAL SELECT (TEST) button on the remote control three times in NORMAL mode (or twice in PHANTOM mode) so that "T" is displayed. Then, press the ⏮ DOWN or UP ⏭ button. Each time one of the buttons is pressed, the delay time changes as shown below.

20ms ←→ 30ms

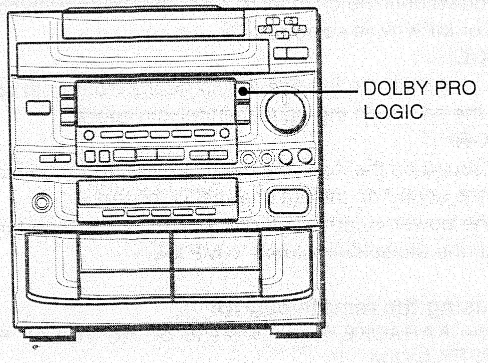


To change the sound levels after adjusting the balance with the noise sequencer

The sound levels of the center or surround speakers can be adjusted during playback of laser discs or video software.

1 Press the MANUAL SELECT (TEST) button on the remote control once or twice to select "C" (center) or "S" (surround).
2 While the "C" or "S" is displayed, press the ⏮ DOWN or UP ⏭ button on the remote control to adjust the volume.

PLAY WITH DOLBY PRO LOGIC



1 **Start playback of the video source.**

2 **Press the DOLBY PRO LOGIC button.**
NORMAL is selected, and the playback sound has the DOLBY PRO LOGIC effect.

To cancel DOLBY PRO LOGIC mode

Press the DOLBY PRO LOGIC button repeatedly until P-oFF is displayed.

ADDITIONAL DOLBY PRO LOGIC MODES

In addition to the NORMAL mode, this unit is also equipped with the PHANTOM and the 3 CH LOGIC modes.
PHANTOM mode: Use this mode when no center speaker is connected. The center channel signals are output through the left and right speakers.
3 CH LOGIC mode: Use this mode when no surround speakers are connected. This mode reproduces rear sounds through the front speakers.

To select PHANTOM or 3 CH LOGIC

Press the DOLBY PRO LOGIC button to run through the mode choices for selection in the following sequence.

→ NORMAL → PHANTOM → 3 CH LOGIC
cancel

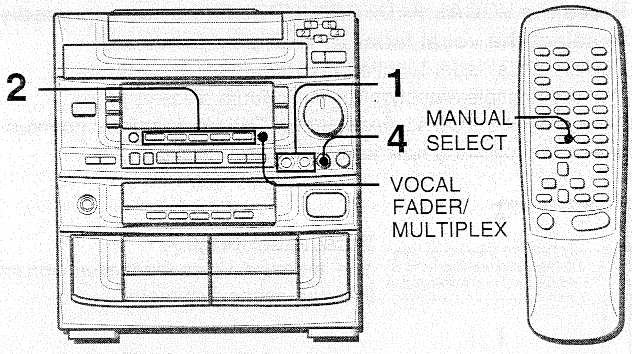
To adjust the balance of connected speaker sound levels

Carry out steps 2 to 4 on page 17.

NOTE

- Depending on the sound source and/or listening conditions, a surround effect may not be obtained even when the DOLBY PRO LOGIC is on.
- The full DOLBY PRO LOGIC effect cannot be obtained when using software without DD DOLBY SURROUND mark. In this case, use the SURROUND mode instead. (See page 7.)

MICROPHONE MIXING

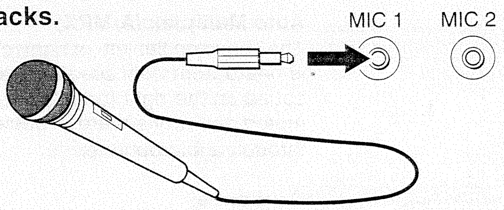


Two microphones (not supplied) can be connected to this unit, allowing you to sing along to music sources.
Use microphones with standard plugs (ø6.3 mm, $^1/_4$ inch).

Before connecting a microphone

Set the MIC MIXING control to MIN.

1 **Connect your microphones to the MIC 1 and MIC 2 jacks.**



2 **Press one of the function buttons to select the source to be mixed, and play the source.**

3 **Adjust the volume and tone of the source.**

4 **Adjust the microphone volume with the MIC MIXING control.**
The volume of both microphones is adjusted simultaneously.

To echo the microphone sound

Press the MANUAL SELECT button on the remote control once and then press the ◄◄ or ►► button. The display changes as follows.

MAX (maximum) ↔ –3 ↔ –6 .... –15 ↔ MIN (minimum)

- Make sure the SURROUND and the DOLBY PRO LOGIC are turned off before pressing the MANUAL SELECT button.

To record microphone sound mixed with source sound

Follow the procedure for recording from the sound source (see page 13).
The SYNC DUB button cannot be used for mixing recording.

When not using the microphones

Set the MIC MIXING control to MIN and remove the microphones from the MIC jacks.

NOTE

- When a connected microphone is used, the SURROUND mode and the DOLBY PRO LOGIC are automatically canceled.
- If a microphone is held too close to the speakers, a howling sound may be produced. In this case, hold the microphone away from the speakers, or decrease the sound level using the MIC MIXING control.
- If sound through the microphone is extremely loud, sound may be distorted. In this case, turn the MIC MIXING control toward MIN.

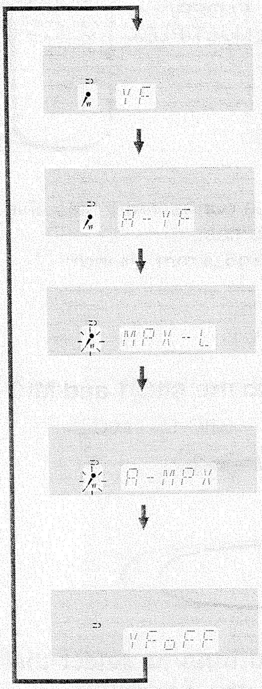
Recommended microphones

Use of unidirectional type microphones is recommended to prevent howling. Contact your local Aiwa dealer for details.

VOCAL FADER/MULTIPLEX FUNCTIONS

This unit can use discs or tapes as Karaoke sources.

Press the VOCAL FADER/MULTIPLEX button repeatedly to select the vocal fader or multiplex function.
Use the vocal fader function for ordinary discs or tapes.
Use the multiplex function for multi audio discs or tapes.
Each time the VOCAL FADER/MULTIPLEX button is pressed, one of the following functions is selected cyclically.



Vocal Fader (VF)
The singer's voice becomes softer than the accompaniment.

Auto Vocal Fader (A-VF)
The singer's voice becomes softer only while there is audio input through a microphone.

Multiplex (MPX-L)
The sound on the left (or right) channel is heard from both speakers, and the sound on the right (or left) channel is muted.

Auto Multiplex (A-MPX)
The sound on the left (or right) channel is heard from both speakers, and the sound on the right (or left) channel is muted only while there is audio input through a microphone.

Cancel

To change the time lag setting of the Auto Vocal Fader or Auto Multiplex function

When Auto Vocal Fader or Auto Multiplex is selected, "A-VF" or "A-MPX" is displayed for 3 seconds and changes to the selected function name. After the selected function name is displayed, hold the VOCAL FADER/MULTIPLEX button down until the desired time lag setting, SLOW or FAST, is selected.

SLOW
Fade-out of original singer's voice returns to the normal level if there is no audio input from the microphone within 2 seconds.

FAST
Fade-out of original singer's voice returns to the normal level if there is no audio input from the microphone within 0.5 seconds.

When the power is turned off or one of the function buttons is pressed, the Auto Vocal Fader and Auto Multiplex restore to SLOW.

To change the muted channel of the Multiplex function

When Multiplex is selected, "MPX-L" is displayed for 3 seconds and changes to the selected function name. After the selected function name is displayed, hold the VOCAL FADER/MULTIPLEX button down until the channel to be output from both speakers, MPX-L or MPX-R, is selected.

MPX-L
The sound on the left channel is heard from both speakers and the sound on the right channel is muted.

MPX-R
The sound on the right channel is heard from both speakers and the sound on the left channel is muted.

When the power is turned off or one of the function buttons is pressed, the Multiplex restores to MPX-L.

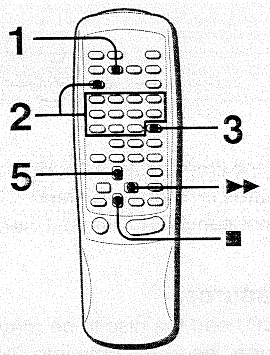
When using the remote control

Press the KARAOKE button instead of the VOCAL FADER/MULTIPLEX button.

NOTE

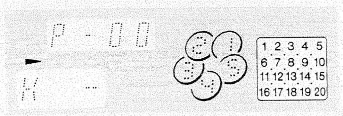
- The VOCAL FADER functions may not operate correctly with the following CDs or tapes.
  - Those with monaural sound
  - Those recorded with strong echoes
  - Those with the vocal part recorded on the right or left side of the sound width
- While the VOCAL FADER function is on, the sound is output as monaural.

KARAOKE PROGRAM



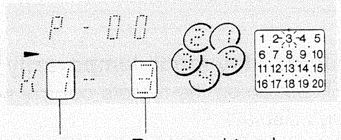
Before or during CD play, you can reserve up to 15 tracks to be played after the current track. Each reservation is cleared when it finishes playing.
Use the remote control.

1 Press the PRGM button once.



2 Press the DIRECT button then one of the numeric buttons 1 to 5 within 3 seconds to select a disc, and press the numeric buttons to select a track.

3 Press the KARAOKE ENTER button.



Reserved disc number

Reserved track number

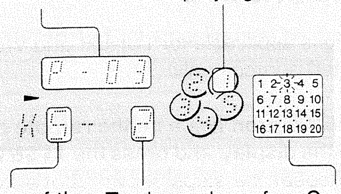
4 Repeat steps 2 and 3 to reserve other tracks.

5 Press the ◀▶ button to start play.

After a track is played, it is cleared from the program. Another track can be reserved in place of the cleared track.

Number of remaining reserved tracks

Currently playing disc



Disc number of the last reservation

Track number of the last reservation

Currently playing track number flashes.

To add a reservation during play

Repeat steps 2 and 3.

To check the reserved tracks

Press the EDIT/CHECK button repeatedly. Each time it is pressed, the disc number and track number are displayed in the reserved order.

To stop play

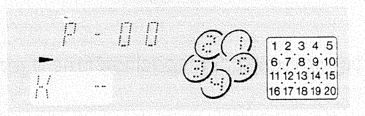
Press the ■ button. Press the ◀▶ button to start again.

To skip a track

Press the ▶▶ button. The skipped track is cleared from the program.

To clear all the reservations

Press the ▶▶ button repeatedly until "K -" is displayed.

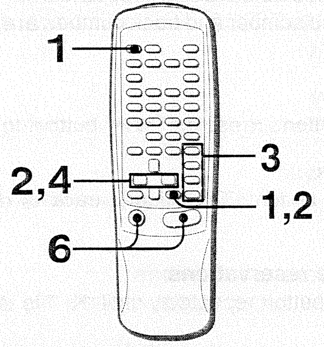


Press it once more to cancel the Karaoke programs. The display returns to that of CD play.

NOTE

- If the reserved track number does not exist on the selected disc, the unit stops playing and the display flashes.
  In this case, press the ▶▶ button to skip the error track. Then press the ◀▶ button to start play with the next reserved track.
- When the PRGM button is pressed repeatedly in step 1, PRGM is displayed and the unit enters CD programmed play mode (page 12).
  To cancel programmed play, press the ■ button.

SETTING THE TIMER

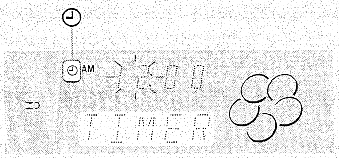


The unit can be turned on at a specified time every day with the built-in timer.

Preparation
Make sure the clock is set correctly. (See page 6.)

Use the remote control.

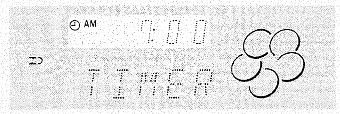
1. **Press the TIMER button once to display ⏲, and press the ❚❚ SET button within 4 seconds.**
   ⏲ is displayed, and the hour flashes.



NOTE

If you do not press the ❚❚ SET button within 4 seconds, another operation may start.

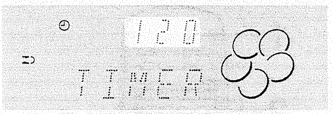
2. **Designate the hour of the timer-on time by pressing the ⏮ DOWN or ⏭ UP button, and the ❚❚ SET button. Repeat to designate the minute of the timer-on time.**



After you designate the timer-on time, TIMER and one of the source name flashes alternately on the display for 4 seconds.

3. **Within 4 seconds, press one of the function buttons to select a source.**
   "TIMER" and the selected source name flash alternately for 4 seconds. At this time, the selected function button does not light up in red.
   - If this step is not completed within 4 seconds, repeat from step 1.
   - If the TUNER button is pressed, the band cannot be selected in this step.

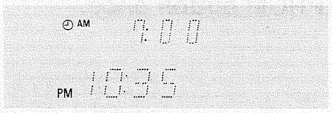
4. **Within 4 seconds, select the duration for the timer-activated period with the ⏮ DOWN or ⏭ UP button.**



The duration for the timer-activated period can be set between 10 and 240 minutes in 10-minute steps.
- If this step is not completed within 4 seconds, repeat from step 1.

5. **Prepare the source.**
   To listen to a CD, load the disc to be played first on tray 1.
   To listen to a tape, insert the tape into Deck 1 or 2.
   To listen to the radio, tune in to a station.

6. **Press the POWER button to turn the unit off after adjusting the volume and tone.**
   ⏲ remains on the display after the power is turned off (timer standby mode).



When the timer-on time is reached, the unit turns on and begins play with the selected source.

To check the specified time and source
Press the TIMER button on the remote control. The timer-on time and the selected source name are displayed for 4 seconds. However, the duration for the timer-activated period will not be displayed.

To cancel timer standby mode temporarily
Press the TIMER button on the remote control so that ⏲ or ⏲REC disappears on the display.
To restore the timer standby mode, press again to display ⏲ or ⏲REC.

Using the unit while it is in timer standby mode
You can use the unit normally after setting the timer.
Before turning off the power, repeat step 5 to prepare the source, and adjust the volume and tone.

TIMER RECORDING

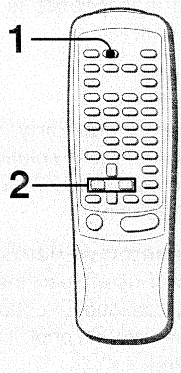
Timer recording is applicable for TUNER and VIDEO/AUX (with an external timer) sources only.

Press the TIMER button twice on the remote control so that ⏲REC appears on the display, and press the ❚❚ SET button within 4 seconds. Repeat the steps shown above from step 2 and insert the tape to be recorded into Deck 2 after step 5.

NOTE

- Timer playback and timer recording will not begin unless the power is turned off.
- Connected equipment cannot be turned on and off by the built-in timer of this unit. Use an external timer.

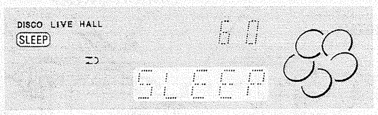
SETTING THE SLEEP TIMER



The unit can be turned off automatically at a specified time.

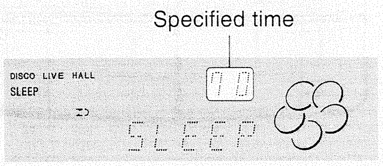
Use the remote control.

1 **Press the SLEEP button.**



2 **Within 4 seconds, press the ◀◀ or ▶▶ button to specify the amount of time until the power turns off.**

Each time the button is pressed, the time changes between 10 and 240 minutes in 10-minute steps.



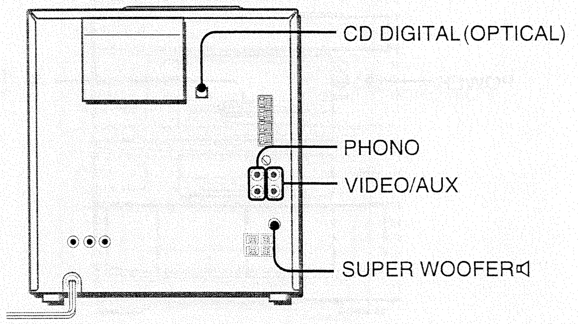
To check the time remaining until the power turns off

Press the SLEEP button once. The remaining time is displayed for 4 seconds.

To cancel the sleep timer

Press the SLEEP button twice so that "SLEEP" on the display disappears.

CONNECTING OPTIONAL EQUIPMENT



Refer to the operating instructions of the connected equipment for details.

- The connecting cords are not supplied. Obtain the necessary connecting cords.
- Consult your local Aiwa dealer for optional equipment.

VIDEO/AUX JACKS

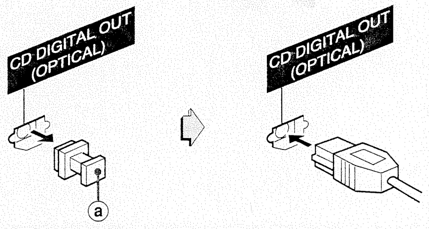
This unit can input analog sound signals through these jacks. Use a cable with RCA phono plugs to connect audio equipment (LD player, VCR, TV, etc.)
Connect the red plug to the R jack, and the white plug to the L jack.

PHONO JACKS

Connect a turntable. Use an Aiwa turntable equipped with a built-in equalizer amplifier.

CD DIGITAL OUT (OPTICAL) JACK

This unit can output CD digital sound signals through this jack. Use an optical cable to connect digital audio equipment (digital amplifier, DAT deck, MD recorder, etc.)
Remove the dust cap ⓐ from the CD DIGITAL OUT (OPTICAL) jack, then connect an optical cable plug to the CD DIGITAL OUT (OPTICAL) jack.



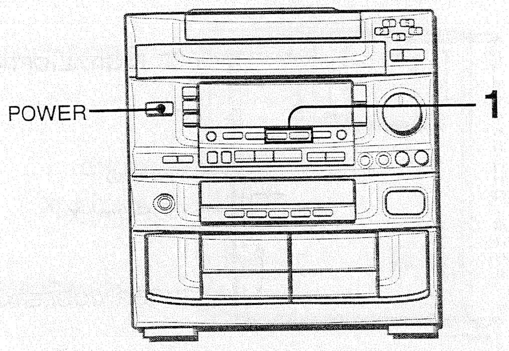
When the CD DIGITAL OUT (OPTICAL) jack is not being used

Attach the supplied dust cap.

SUPER WOOFER ◁ JACK

Connect an optional powered sub woofer with a built-in amplifier to the jack.

LISTENING TO EXTERNAL SOURCES



To play equipment connected to the PHONO or VIDEO/AUX jacks, proceed as follows.

1 Press the PHONO or VIDEO/AUX button.

PHONO or VIDEO appears on the display.

2 Play the connected equipment.

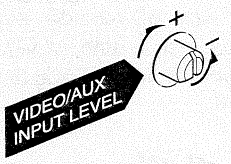
To change a source name on the display

When the VIDEO/AUX button is pressed, VIDEO is displayed initially. It can be changed to PHONO or TV.
With the power on, press the POWER button while pressing the VIDEO/AUX button.
Repeat the procedure until the desired name appears on the display.

To adjust the sound level of the external source

When the sound level of the external source is much higher or much lower than that of other function sources, adjust it as follows.

1 Press the VIDEO/AUX button and play the equipment.
2 Turn the VIDEO/AUX INPUT LEVEL control on the rear panel until the sound level becomes the same as that of other function sources.



CARE AND MAINTENANCE

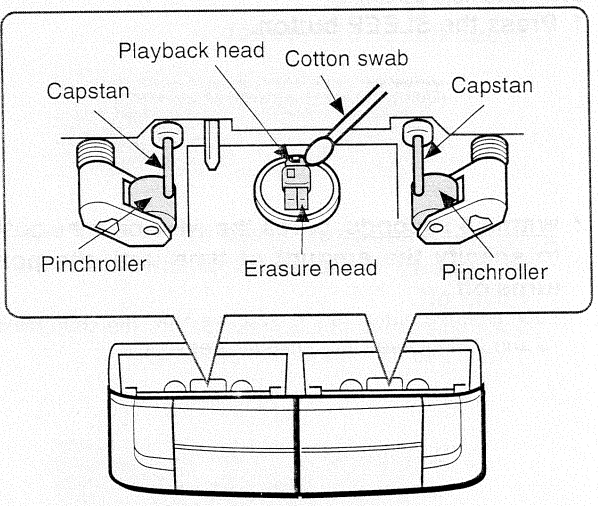
Occasional care and maintenance is needed to optimize the performance of your unit.

To clean the cabinet

Use a soft and dry cloth.
If the surfaces are extremely dirty, use a soft cloth lightly moistened with mild detergent solution. Do not use strong solvents, such as alcohol, benzine or thinner as these could damage the finish of the unit.

To clean the heads and tape paths

After every 10 hours of use, clean the heads and tape paths with a head cleaning cassette or cotton swab moistened with cleaning fluid or denatured alcohol. (These cleaning kits are commercially available.)
When cleaning with a cotton swab, wipe the recording/playback head, erasure head (deck 2 only), capstans, and pinchrollers.



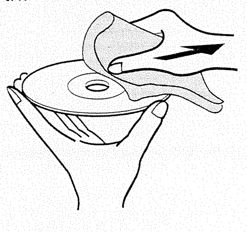
After cleaning the heads and tape paths with a liquid head cleaning cassette or a moistened swab, wait until the cleaned parts are completely dry before inserting the tapes.

To demagnetize the heads

The heads may become magnetized after long-term use. This may narrow the output range of recorded tapes and increase noise. After 20- to 30-hour use, demagnetize the heads with any commercially available demagnetizer.

Care of discs

- When a disc becomes dirty, wipe the disc from the center out with a cleaning cloth.



- After playing a disc, store the disc in its case. Do not leave the disc in places that are hot or humid.

Care of tapes

- Store tapes in their cases after use.
- Do not leave tapes near magnets, motors, television sets, or any source of magnetism. This will downgrade the sound quality and cause noise.
- Do not expose tapes to direct sunlight, or leave them in a car parked in direct sunlight.

SPECIFICATIONS

Main unit CX-ZVM27

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

AM tuner section

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

Amplifier section

Power output	**Front** 80 watts per channel, Min. RMS at 6 ohms, from 50 Hz to 20 kHz, with no more than 1 % Total Harmonic Distortion **Rear (Surround)** 10 watts per channel, Min. RMS at 16 ohms, from 1 kHz, with no more than 1 % Total Harmonic Distortion **Center** 20 watts, Min. RMS at 8 ohms, from 1 kHz, with no more than 1 % Total Harmonic Distortion
Total harmonic distortion	0.1 % (40 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 240 mV (adjustable) PHONO: 400 mV (47 kohms) MIC 1, MIC 2: 1.6 mV (20 kohms)
Outputs	SUPER WOOFER: 2.25 V SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS: accept speakers of 16 ohms or more CENTER SPEAKER: accepts speakers of 8 ohms more PHONES (stereo jack): accepts headphones of 32 ohms or more

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	CrO_2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz – 15000 Hz
Signal-to-noise ratio	60 dB (Dolby B NR ON, CrO_2 tape peak level, above 400 Hz)
Recording system	AC bias
Heads	Deck 1: Playback head × 1 Deck 2: Recording/playback/ erase head × 1

Compact disc player section

Laser	Semiconductor laser ($\lambda = 780$ nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.03 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

General

Power requirements	120 V AC, 60 Hz
Power consumption	140 W
Dimensions of main unit (W × H × D)	360 × 394.5 × 375.5 mm ($14^{1}/_{4} \times 15^{5}/_{8} \times 14^{7}/_{8}$ in.)
Weight of main unit	11 kg (24 lbs 4 oz.)

Speaker system SX-Z27

Cabinet type	3 way, bass reflex with surround speaker
Speakers	Woofer: 220 mm cone type Tweeter: 80 mm cone type Super tweeters: 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	90 dB/W/m
Dimensions (W × H × D)	260 × 444 × 300 mm ($10^{1}/_{4} \times 17^{1}/_{2} \times 11^{7}/_{8}$ in.)
Weight	5.8 kg (12 lbs 13 oz.)

Specifications and external appearance are subject to change without notice.

DOLBY NR/DOLBY PRO LOGIC

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COPYRIGHT

Please check the laws on copyright relating to recordings from discs, radio or external tape for the country in which the machine is being used.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Modifications or adjustments to this product, which are not expressly approved by the manufacturer, may void the user's right or authority to operate this product.

TROUBLESHOOTING GUIDE

If the unit fails to perform as described in these Operating Instructions, check the following guide.

GENERAL

There is no sound.

- Is the AC cord connected properly?
- Is there a bad connection? (→ page 3)
- There may be a short circuit in the speaker terminals.
  → Disconnect the AC cord, then correct the speaker connections.
- Was an incorrect function button pressed?

Sound is emitted from one speaker only.

- Is the other speaker disconnected?

The output sound is not stereo.

- Is the Karaoke function turned on? (→ page 19)

An erroneous display or a malfunction occurs.

→ Reset the unit as stated below.

TUNER SECTION

There is constant, wave-like static.

- Is the antenna connected properly? (→ page 3)
- Is the signal weak?
  → Connect an outdoor antenna.

The reception contains noise interferences or the sound is distorted.

- Is the system picking up external noise or multipath distortion?
  → Change the orientation of the antenna.
  → Move the unit away from other electrical appliances.

CASSETTE DECK SECTION

The tape does not run.

- Is Deck 2 in pause mode? (→ page 10)

The sound is off-balance or not adequately high.

- Is the playback head dirty? (→ page 23)

Recording is not possible.

- Is the erasure prevention tab on the tape broken off? (→ page 9)
- Is the recording head dirty? (→ page 23)

Erasure is not possible.

- Is the erasure head dirty? (→ page 23)
- Is a metal tape being used?

High frequency sound is not emitted.

- Is a tape recorded without Dolby NR played back with the Dolby NR system operating? (→ page 10)
- Is the recording/playback head dirty? (→ page 23)

CD PLAYER SECTION

The CD player does not play.

- Is the disc correctly inserted? (→ page 11)
- Is the disc dirty? (→ page 23)
- Is the lens affected by condensation?
  → Wait approximately one hour and try again.

To reset

If an unusual condition occurs in the display window or the cassette decks, reset the unit as follows.

1 Press the POWER button to turn off the power.
2 Press the POWER button to turn the power back on while pressing the ■CLEAR button. Everything stored in memory after purchase is canceled.

If the power cannot be turned off in step 1 because of a malfunction, reset by disconnecting the AC cord and repeat step 2.

PARTS INDEX

Instructions about each part on the main unit or remote control are indicated on the pages listed below.

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